Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in this application.

Listing of Claims:

1. (Currently amended) A method for producing a pair of stereo images customized for an individual user from an input stereoscopic image, comprising the steps of:

a) obtaining customization information including a stereoscopic ~~image fusional~~ disparity range for the individual user, wherein the stereoscopic disparity range is characterized by a user-specific crossed disparity upper limit and a user-specific uncrossed disparity upper limit;

b) obtaining a scene disparity map for the input stereoscopic image, wherein the input stereoscopic image includes at least one of a given pair of stereo images or a given three-dimensional (3D) computer graphic model;

c) determining an aim disparity range for a customized pair of stereo images responsive to the stereoscopic image ~~fusional~~ disparity range for the individual user and the obtained scene disparity map;

d) at least one of generating a customized disparity map responsive to the aim disparity range for the individual user or generating customized rendering conditions for a three-dimensional (3D) computer graphic model responsive to the aim disparity range for the individual user; ~~and~~

e) using a digital image processor to produce the customized pair of stereo images for subsequent display by using the customized disparity map or the customized rendering conditions for the three-dimensional (3D) computer graphic model; and

f) displaying the customized pair of stereo images on a stereoscopic display device.

2. (Previously presented) The method claimed in claim 1, wherein the customization information further includes at least one of a user profile or a rendering intent subject to a predetermined task choice or skill level.

3-6. (Canceled)

7. (Previously presented) The method claimed in claim 1, wherein the step of determining the scene disparity map includes obtaining a scene convergence point and depth information from the 3D computer graphics model.

8. (Canceled)

9. (Currently amended) The method claimed in claim 1, wherein the step of generating a customized disparity map further includes applying a predetermined mapping function to modify the scene disparity map.

10. (Original) The method claimed in claim 9, wherein the predetermined mapping function is dependent on a region of interest.

11. (Original) The method claimed in claim 10, wherein the region of interest is dynamic.

12. (Previously presented) The method claimed in claim 1, wherein the step of determining the aim disparity map is further responsive to skill of the user within a stereoscopic viewing environment.

13. (Previously presented) The method claimed in claim 1, wherein the step of determining the aim disparity map is further responsive to a type of task that the user will perform in a stereoscopic viewing environment.

14. (Cancelled).

15. (Original) The method claimed in claim 1, wherein the step of generating the customized disparity map is accomplished by applying a linear transformation to the scene disparity map.

16. (Original) The method claimed in claim 1, wherein the step of generating the customized disparity map is accomplished by applying a non-linear transformation to the scene disparity map.

17-18. (Cancelled)

19. (Original) The method claimed in claim 10 wherein the region of interest is based upon a measurement of fixation position.

20. (Original) The method claimed in claim 10, wherein the region of interest is based upon a map of probable fixations.

21. (Cancelled)

22. (Original) The method claimed in claim 1, wherein the step of generating rendering conditions for a three-dimensional (3D) computer graphic model includes computing a location, an orientation, a focal distance, a magnification and a depth of field correlating to a pair of simulated cameras.

23. (Previously presented) The method claimed in claim 1, wherein the customized rendering conditions are generated by modifying one or more of a set of correlating camera parameters including camera location, orientation, focal distance, magnification or depth of field.

24. (Withdrawn) A method for determining an aim disparity range for stereoscopic imaging, comprising the steps of:

a) obtaining a stereoscopic display user's identifier;

b) determining whether the stereoscopic display user has a user profile;

c) retrieving a found user profile for the stereoscopic display user;

d) creating the user profile where no existing user profile is found;

e) obtaining rendering intent correlating to the stereoscopic display user; and

f) calculating the aim disparity range subject to above steps.

25. (Withdrawn) The method for determining an aim disparity range as claimed in claim 24, further comprising the step of assigning values for skill level (Cs) of the stereoscopic display user and type of tasks (Ct) that the stereoscopic display user will perform.

26. (Withdrawn) The method for determining an aim disparity range as claimed in claim 24, further comprising the step of assigning a value, as an adaptive factor, Ca, for compensating for a dynamic viewing experience subject to the stereoscopic display user.

27. (Withdrawn) The method claimed in claim 24, wherein the user profile is created from the group consisting of on-display assessment, stored optometric data, and a default user profile.

28. (Withdrawn) The method claimed in claim 27, wherein the on-display assessment includes manipulating one or more test stimuli shown in a user interface for adjusting disparity between at least one target and the stereoscopic display user.

29. (Withdrawn) The method claimed in claim 27, wherein the on-display assessment includes automatic manipulation of one or more test stimuli shown in a user interface for adjusting disparity between at least one target and the stereoscopic display user.

30. (Withdrawn) The method claimed in claim 27, wherein creating the user profile includes the step of obtaining optometric parameters for a set of accommodation planes as the stored optometric data.

31. (Withdrawn) The method claimed in claim 30, wherein the step of obtaining optometric parameters includes selecting from the group consisting of inter-pupillary distance, near and distant testing distances, near and distant phoria, and near and distant fusional reserves.

32. (Withdrawn) The method claimed in claim 27, wherein the default user profile is determined using an optometric model.

33. (Withdrawn) The method claimed in claim 27, wherein the default user profile is determined using interpolation of a set of statistical data from an optometric assessment of the user population.

34. (Withdrawn) The method claimed in claim 30, further comprising the steps of:

a) generalizing the optometric parameters for a different set of accommodation planes;

b) calculating optometric parameters for a single accommodation plane of display;

c) obtaining comfort values for a user's fusing capability; and

d) determining the aim disparity range based on the optometric parameters and above steps.

35. (Currently amended) A stereoscopic display system customized for an individual user's stereoscopic fusing capability, comprising:

a) a stereoscopic image source;

b) a storage device for storing customization information including a stereoscopic ~~image fusional~~ disparity range for the individual user, wherein the stereoscopic disparity range is characterized by a user-specific crossed disparity upper limit and a user-specific uncrossed disparity upper limit;

c) a stereoscopic display device; and,

d) a digital image processor for

receiving a stereoscopic image from the stereoscopic image source and the customization information from the storage device,

processing the received stereoscopic images and providing a customized stereoscopic image to the stereoscopic display device, including modifying the disparity of one or more pixels in the received stereoscopic image according to the stereoscopic image ~~fusional~~ disparity range for the individual user.

36. (Currently amended) The stereoscopic display system claimed in claim 35, wherein the stereoscopic image ~~fusional~~ disparity range for the user is determined using at least one of a capability of the user to converge the user's eyes, a capability of the user to diverge the user's eyes, a user's phoria, a user's capability of accommodation, a user's range of fusion, or a rendering intent of the image.

37-40. (Cancelled)

41. (Currently amended) The stereoscopic display system claimed in claim 35, wherein the digital image processor further comprises:

i) means for obtaining a scene disparity map for a pair of given stereo images or a three-dimensional (3D) computer graphic model;

ii) means for determining an aim disparity range for a customized pair of stereo images responsive to the stereoscopic disparity range for the individual user and the obtained scene disparity map ~~the user~~;

iii) means for generating a customized disparity map responsive to the aim disparity range ~~stereoscopic image fusional range for the user~~; and

iv) means for re-rendering the stereo images for subsequent display responsive to the customized disparity map.

42. (Currently amended) The stereoscopic display system claimed in claim 41, wherein the means for determining an aim disparity range for the customized pair of stereo images ~~user~~, includes:

a) means for obtaining a stereoscopic display user's identifier;

b) means for determining whether the stereoscopic display user has a user profile;

c) means for retrieving a found user profile for the stereoscopic display user;

d) means for creating the user profile where no existing user profile is found;

e) means for obtaining rendering intent correlating to the stereoscopic display user;

f) means for assigning values for skill level (Cs) of the stereoscopic display user and type of tasks (Ct) that the stereoscopic display user will perform;

g) means for assigning a value, as an adaptive factor, Ca, for compensating for a dynamic viewing experience subject to the stereoscopic display user; and

h) means for calculating the aim disparity range subject to above steps.

43. (Currently amended) A stereoscopic display system that determines ~~an aim~~ a stereoscopic disparity range associated with an individual user based on optometric data, comprising:

a) means for obtaining optometric parameters for the individual user for a set of accommodation planes;

b) means for generalizing the optometric parameters for the individual user for a different set of accommodation planes;

c) means for calculating optometric parameters for the individual user for a single accommodation plane of display using the generalized optometric parameters;

d) means for obtaining a comfort level related to the individual user's fusing capability; ~~and~~

e) means for determining the ~~aim~~ stereoscopic disparity range for the individual user based on the calculated optometric parameters for the individual user for the single accommodation plane of display and the comfort level related to the individual user's fusing capability, wherein the stereoscopic disparity range is characterized by a user-specific crossed disparity upper limit and a user-specific uncrossed disparity upper limit; and

f) means for receiving an input stereoscopic image;

g) digital image processor for determining a customized pair of stereo images responsive to an input stereoscopic image and the stereoscopic disparity range for the individual user; and

h) stereoscopic display device for displaying the customized pair of stereo images.

44. (Withdrawn) A user interface for obtaining the stereoscopic capabilities of a user, comprising:

one or more objects of known visual disparity displayed by the user interface.

45. (Withdrawn) The user interface in claim 44, wherein the user indicates their comfort when viewing the object.

46. (Withdrawn) The user interface in claim 44, wherein the user controls the known visual disparity of the one or more objects and indicates when they are unable to fuse one or more of the objects.

47. (Withdrawn) The user interface in claim 44, wherein the known visual disparity of the one or more objects is automatically updated and indicates to the user when the user is or is not able to fuse one or more of the objects.

48. (Withdrawn) The user interface in claim 44, wherein a series of objects of known visual disparity is displayed and the user indicates which of these the user is or is not able to fuse.

49. (Withdrawn) The user interface in claim 44, wherein an accommodation distance for one or more of the objects is different than an accommodation distance for one or more additional objects.

50. (Withdrawn) A software product capable of determining a range of stereo disparities that a user can fuse.

51. (Withdrawn) The software product as claimed in claim 50 capable of modifying rendering parameters within a computer application.

52. (Withdrawn) The software product as claimed in claim 51 capable of modifying the rendering parameters within a graphics rendering card.

53. (Cancelled)

54. (Currently amended) A stereoscopic display system customized for an individual user's stereoscopic fusing capability, comprising:

a) an image source for supplying stereoscopic imagery;

b) a storage device for storing customization information including a stereoscopic ~~image fusional~~ disparity range for the individual user, wherein the stereoscopic disparity range is characterized by a user-specific crossed disparity upper limit and a user-specific uncrossed disparity upper limit;

c) a stereoscopic display device to display stereoscopic images; and

d) a rendering processor for receiving the stereoscopic imagery from the image source and rendering the stereoscopic imagery to provide a customized stereoscopic image pair to the stereoscopic display device, including manipulating the relative disparity of the customized stereoscopic image pair dependent upon a disparity map for the stereoscopic imagery and the image ~~fusional~~ disparity range for the individual user.

55. (Cancelled)

56. (Previously presented) The stereoscopic display system claimed in claim 54, further comprising:

a sensor communicatively linked to the rendering processor for providing sensory data about the user to the rendering processor.

57. (Previously presented) The stereoscopic display system claimed in claim 56, wherein the sensory data includes head positioning, accommodative at least one of a state of the user's eye and a direction of eye gaze of the user.